

Insulin-like Growth Factor 1 (IGF-1), LC/MS

CPT Code: 84305

Order Code: 16293

Synonyms: IGF1, Somatomedin-C, Insulin Like Growth Factor

ABN Requirement: No

Specimen: Serum

Volume: 0.5 mL

Minimum Volume: 0.3 mL

Container: Gel-barrier tube (SST)

Collection:

1. Collect and label sample according to standard protocols.
2. Gently invert tube 5 times immediately after draw. DO NOT SHAKE.
3. Allow blood to clot 30 minutes.
4. Centrifuge for 10 minutes.

Transport: Store serum at 2°C to 8°C after collection and ship the same day per packaging instructions included with the provided shipping box.

Stability:

Ambient (15-25°C): 48 hours

Refrigerated (2-8°C): 5 days

Frozen (-20°C): 28 days

Causes for Rejection: Specimens other than serum; improper labeling; samples not stored properly; samples older than stability limits; specimens received in glass tube; gross hemolysis; gross lipemia; grossly icteric

Methodology: Liquid Chromatography/Mass Spectrometry (LC/MS)

Turn Around Time: 3-6 days

Reference Range(s):

Pediatric	Male (ng/mL)	Female (ng/mL)
<1 year	16-142	17-185
1-1.9 years	16-134	16-175
2-2.9 years	16-135	16-178
3-3.9 years	30-155	38-214
4-4.9 years	28-181	34-238
5-5.9 years	31-214	37-272
6-6.9 years	38-253	45-316
7-7.9 years	48-298	58-367
8-8.9 years	62-347	76-424
9-9.9 years	80-398	99-483
10-10.9 years	100-449	125-541
11-11.9 years	123-497	152-593
12-12.9 years	146-541	178-636
13-13.9 years	168-576	200-664
14-14.9 years	187-599	214-673
15-15.9 years	201-609	218-659
16-16.9 years	209-602	208-619
17-17.9 years	207-576	185-551

Adult	ng/mL
18-19.9 years	108-548
20-24.9 years	83-456
25-29.9 years	63-373
30-39.9 years	53-331
40-49.9 years	52-328
50-59.9 years	50-317
60-69.9 years	41-279
70-79.9 years	34-245

>80 years	34-246
Z-Scores	-2.0 - +2.0

Clinical Significance: Insulin-like Growth Factor 1 (IGF-1 or Somatomedin C), a protein involved in stimulating somatic growth, is regulated principally by Growth Hormone (GH) and nutritional intake. IGF-1 is transported in serum by several proteins; this helps maintain relatively high IGF-1 plasma levels and minimizes fluctuations in serum IGF-1 concentrations.

Measuring IGF-1 is useful in several growth-related disorders. Dwarfism caused by deficiency of growth hormone (hypopituitarism) results in decreased serum levels of IGF-1, while acromegaly (growth hormone excess) results in elevated levels of IGF-1. IGF-1 measurements are also helpful in assessing nutritional status; levels are reduced in undernutrition and restored with a proper diet.

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